### Mine Safety and Health Admin., Labor

- (c) Detonator leg wires shall be shunted until connected into the blasting circuit.
  - (d) Blasting cables shall be-
- (1) Well insulated, copper wire of a diameter not smaller than 18-gauge; and
- (2) Long enough to permit the round to be fired from a safe location that is around at least one corner from the blasting area.
- (e) Blasting cables shall be shunted until immediately before firing, except when testing for circuit continuity.
- (f) Wire used between the blasting cable and detonator circuitry shall—
  - (1) Be undamaged;
  - (2) Be well insulated:
- (3) Have a resistance no greater than 20-gauge copper wire; and
  - (4) Be not more than 30 feet long.
- (g) Each wire connection in a blasting circuit shall be—  $\,$ 
  - (1) Properly spliced; and
- (2) Separated from other connections in the circuit to prevent accidental contact and arcing.
- (h) Uninsulated connections in each blasting circuit shall be kept out of water and shall not contact the coal, roof, ribs, or floor.
- (i) When 20 or fewer boreholes are fired in a round, the blasting circuit shall be wired in a single series.
- (j) Immediately prior to firing, all blasting circuits shall be tested for continuity and resistance using a blasting galvanometer or other instrument specifically designed for testing blasting circuits.

[53 FR 46786, Nov. 18, 1988; 54 FR 27641, June 30, 1989]

# $\S\,75.1324$ Methane concentration and tests.

- (a) No shot shall be fired in an area that contains 1.0 volume percent or more of methane.
- (b) Immediately before shots are fired, the methane concentration in a working place or any other area where blasting is to be performed, shall be determined by a person qualified to test for methane.

## §75.1325 Firing procedures.

(a) Shots shall be fired by a qualified person or a person working in the pres-

- ence of and under the direction of a qualified person.
- (b) Only one face in a working place shall be blasted at a time, except that when blasting cut coal up to three faces may be blasted in a round if each face has a separate kerf and no more than a total of 20 shots connected in a single series are fired in the round. A permit to fire more than 20 boreholes in a round under the provisions of 30 CFR 75.1320 and 75.1321 may not be obtained for use when blasting multiple faces.
  - (c) Before blasting—
- (1) All persons shall leave the blasting area and each immediately adjacent working place where a hazard would be created by the blast, to an area that is around at least one corner from the blasting area;
- (2) The qualified person shall ascertain that all persons are a safe distance from the blasting area; and
- (3) A warning shall be given and adequate time allowed for persons to respond.
- (d) All shots shall be fired promptly, after all persons have been removed to a safe location.

[35 FR 17890, Nov. 20, 1970, as amended at 56 FR 51616, Oct. 11, 1991]

## § 75.1326 Examination after blasting.

- (a) After blasting, the blasting area shall not be entered until it is clear of smoke and dust.
- (b) Immediately after the blasting area has cleared, a qualified person or a person working in the presence of and under the direction of a qualified person, shall examine the area for misfires, methane and other hazardous conditions.
- (c) If a round has partially detonated, the qualified person shall immediately leave the area and no person shall reenter the affected area for at least 5 min-

### § 75.1327 Misfires.

- (a) When misfires occur, only work by a qualified person to dispose of misfires and other work necessary to protect persons shall be done in the affected area.
- (b) When a misfire cannot be disposed